We claim:

1.   A method for translating a virtual memory address into a physical memory address in a multi-node system, the method comprising:

        providing the virtual memory address at a source node;

        determining that a translation for the virtual memory address does not exist;

        determining a physical node to query based on the virtual memory address;

        querying an emulated remote translation table (ERTT) segment on the physical node for the translation for the virtual memory address; and

        if the translation is received then loading the translation into a translation lookaside buffer (TLB) on the source node.

2.   The method of claim 1, wherein the ERTT segment resides in a generally accessible memory on the physical node.

3.   The method of claim 1, wherein determining a physical node includes mapping a virtual node to the physical node.

4.   The method of claim 3, wherein mapping a virtual node to a physical node uses a mapping provided by an ERTT header located at a well known location to all nodes used by an application

5.   The method of claim 4, wherein the ERTT header is located on a predetermined virtual node.

6.   A computerized system for managing virtual address translations, the system comprising:

        a plurality of nodes available for executing programs, each of said nodes having a node memory; and

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an operating system executable by a source node of the plurality of nodes, the operating system operable to:

receive a virtual memory address at the source node;

determine that a translation for the virtual memory address does not exist on the source node;

determine a physical node to query based on the virtual memory address;

query an emulated remote translation table (ERTT) segment on the physical node for the translation for the virtual memory address; and

if the translation is received then loading the translation into a translation lookaside buffer (TLB) on the source node.

7.   The system of claim 6, wherein the ERTT segment resides in a generally accessible memory on the physical node.

8.   The system of claim 6, wherein the physical node is determined by mapping a virtual node to the physical node.

9.   The system of claim 3, further comprising an ERTT header located at a well known location to all nodes used by an application to provide the mapping from a virtual node to a physical node.

10.   The system of claim 9, wherein the ERTT header is located on a predetermined virtual node.

11.   A computer-readable medium having computer executable instructions for executing a method for translating a virtual memory address into a physical memory address in a multi-node system, the method comprising:

providing the virtual memory address at a source node;

determining that a translation for the virtual memory address does not exist;

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determining a physical node to query based on the virtual memory address;

querying an emulated remote translation table (ERTT) segment on the physical node for the translation for the virtual memory address; and

if the translation is received then loading the translation into a translation lookaside buffer (TLB) on the source node.

12.   The computer-readable medium of claim 11, wherein the ERTT segment resides in a generally accessible memory on the physical node.

13.   The computer-readable medium of claim 11, wherein determining a physical node includes mapping a virtual node to the physical node.

14.   The computer-readable medium of claim 13, wherein mapping a virtual node to a physical node uses a mapping provided by an ERTT header located at a well known location to all nodes used by an application

15.   The computer-readable medium of claim 14, wherein the ERTT header is located on a predetermined virtual node.